Date: Tuesday, 4/25/2006 8:42:10 AM
User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	**Drawing Name**	: JACK SADDLE
Job Number	: 26814		
Estimate Number	: 11177		
P.O. Number	: N/A	**Part Number**	: D2281
This Issue	: 4/25/2006 **S.O. No.** : N/A	**Drawing Number**	: D2281 REV G
Prsht Rev.	: NC	**Project Number**	: N/A
First Issue	: N/A **Type** : SMALL /MED FAB	**Drawing Revision**	: G
Previous Run	: 25132	**Material**	: N/A
Written By	: See N/A COMMENT Below	**Due Date**	: 5/20/2006 **Qty:** 100 **Um:** Each
Checked & Approved By	: 06.04.25		
Comment	: Est Rev:A Removed from 9 Digit 05-12-02 JLM		

Additional Product

Job Number:

Seq. #:	Machine Or Operation:	Description :
1.0	PG	PURCHASING

Comment: PURCHASING
Issue P/O: 1090 Email or Ship Dxf file to vendor
Laser cut as per Dwg D2281
Material release note required. CJ 06/04/25 (100)

2.0	D2281F	Jack Saddle

Comment: Qty.: 1.0000 Each(s)/Unit Total : 100.0000 Each(s)
Jack Saddle

3.0	PACKAGING 1	PACKAGING RESOURCE #1

Comment: PACKAGING RESOURCE #1
Receive & Inspect For Transit Damage
Ensure material certification is attached
AL 06/05/09 98

4.0	QC6	DIMENSIONAL CHECK

Comment: DIMENSIONAL CHECK
06-05-10 98
count of 1

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1

Comment: Deburr
H-M 06/05/19 (99)

Form: rprocess

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes (No) **DQA:** _____ **Date:** 06/06/07

QA: N/C Closed: _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Date: Tuesday, 4/25/2006 8:42:10 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services **Drawing Name:** JACK SADDLE

Job Number: 26814 **Part Number:** D2281

Job Number:

Seq. #:	Machine Or Operation:	Description :
6.0	BRAKE NC	NC BRAKE
	Comment: NC BRAKE Form as per D2281 using D2281-T2	SB 06/06/05 99
7.0	QC5	INSPECT WORK TO CURRENT STEP
	Comment: INSPECT WORK TO CURRENT STEP	06.06.05 55
8.0	PACKAGING 1	PACKAGING RESOURCE #1
	Comment: PACKAGING RESOURCE #1 Identify and Stock Location: W521	CPL 06.06.06
9.0	DC	DOCUMENT CONTROL
	Comment: DOCUMENT CONTROL Inspection Level 21	99 06/06/07

Job Completion

VL 06.06.07

Form: rprocess

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

QA: N/C Closed: _____ **Date:** _____

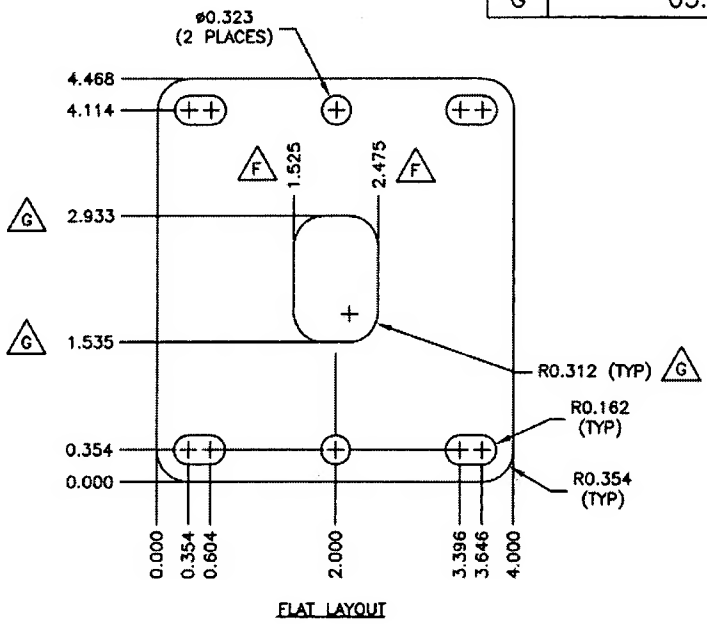
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

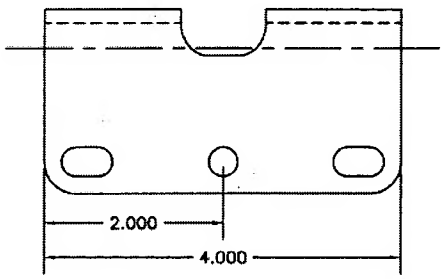
DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
BW			
CHECKED	APPROVED	DRAWING NO.	REV. G
		D2281	SHEET 1 OF 1
DATE		TITLE	SCALE
05.06.07		JACK SADDLE	1:2

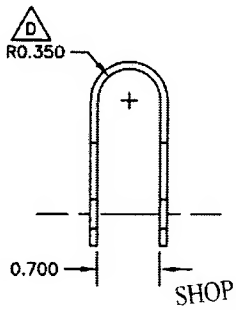
A	94.10.14	NEW ISSUE
B	94.10.18	DIMENSION WAS 2.878
C	94.11.04	ADD TOOLING NOTCH
D	98.03.27	R0.350 WAS R0.280
E	04.11.18	REMOVE TOOLING NOTCHES
F	05.03.16	REDESIGN FLAT PATTERN
G	05.06.07	REDESIGN FLAT PATTERN

RELEASED
05/08/11



FLAT LAYOUT





SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 26814

D2281 JACK SADDLE

1) MATERIAL: 304/316 SS, 0.080 THICK (REF DART SPEC. M304S14GA)
2) FINISH: NONE
3) BREAK ALL SHARP EDGES 0.005 TO 0.010
4) ALL DIMENSIONS ARE IN INCHES
5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

Paragraph 4.3 by TÜV Anlagetechnik GmbH (Notified Body [illegible])

Inspection Certificate EN10204-3.1B

P60124PC001

Shanxi Taigang Stainless Steel CO.,LTD Member of Taiyuan Iron and Steel (Group) Co.,LTD NO.2 jiancaoping,Taiyuan,Shanxi,P.R.China TEL: (0351)3013328 FAX: (0351)3017816 http://www.tisco.com.cn E_mail: tgbxg@tisco.com.cn	MILL TEST CERTIFICATE		
	MATERIAL	AISI304 No.2B Finish	
	SPECIFICATION	ASTM A240/A480	ASME SA240/SA480
	L/C NO.		
	CERTIFICATE NO.	20051187	
	DATE OF ISSUE	/ /	

CUSTOMER	CONTRACT NO.	DATA OF
OLBERT	1187	2005/11/20

Product	Melting furnace	Inspectors stamp	Mark of the Manufacturer
COIL	E+VOD		Shanxi Taiyuan Stainless Steel Co.,ltd

NO.	Heat No.	Coil No.	Quantity	Dimensions	Weight (kg)
8	4505286	5A9-495-1ZD	1	11GA × 48 × C	7009
9	Y506019	5A9-485-1ZB	1	11GA × 48 × C	6679
10	4505044	5A9-458-1ZY	1	14GA × 48 × C	5461
11	4505274	5A9-450-1ZD	1	11GA × 48 × C	4832
12	4505271	5A10-44-3ZJ	1	16GA × 48 × C	8906
13	4505050	5A10-53-1ZJ	1	16GA × 48 × C	8617
14	4505393	5A10-70-4ZY	1	14GA × 48 × C	8642

Chemical Composition

Heat No.	C	Si	Mn	P	S	Cr	Ni	Cu	Al	Mo	N
4505286	0.060	0.470	1.400	0.017	0.003	18.170	8.020	0.010	0.010	0.010	0.055
Y506019	0.050	0.350	0.990	0.032	0.004	18.300	8.090	0.440	0.006	0.120	0.070
4505044	0.060	0.450	1.370	0.018	0.002	18.200	8.120	0.010	0.010	0.010	0.050
4505274	0.060	0.520	1.320	0.017	0.002	18.150	8.120	0.010	0.010	0.010	0.045
4505271	0.060	0.470	1.320	0.016	0.003	18.170	8.110	0.010	0.010	0.010	0.045
4505050	0.060	0.480	1.290	0.014	0.002	18.220	8.040	0.010	0.010	0.010	0.045
4505393	0.070	0.480	1.260	0.017	0.002	18.200	8.070	0.010	0.010	0.010	0.040

Mechanical Properties

Test No.	Tensile R m N/mm²	$R_{p0.2}$ Yield 0.2% N/mm²	$R_{p1.0}$ Yield 1.0% N/mm²	Elongation A5%	Corrosion Tests	Hardness HRB	Hardness HV	Hardness HRC
4505286-T	635	282		55		84 - 83		
Y506019-T	650	266		53		88		
4505044-T	675	307		59		83 - 83		
4505274-T	690	299		56		86 - 85		
4505271-T	700	326		54			188 - 186	
4505050-T	695	297		57			190 - 188	
4505393-T	680	309		60		86 - 85		

Surface and dimensions controlled:

Work Inspecto

INSPECTION

P60124PC001V 3042B .062X48 HT 4505271 4505050

New Zealand Steel Limited
Glenbrook, South Auckland
Postal: Private Bag 92121, Auckland, New Zealand
Telephones: (09) 375 8999 / 375 8111 Auckland
(09) 235 8300 / 235 3636 Waiuku
Fax (09) 375 8959

NEW ZEALAND STEEL

TEST CERTIFICATE

CUSTOMER	Wilkinson P51122ME003	SPECIFICATION	ASTM A1011 CS Type B
CUSTOMER O/N	90-31N-108	PRODUCT	HOT ROLLED PICKLED & OILED
MILL O/N	518691	DIMENSIONS	0.104" x 48" x Coil

CERTIFICATE No	TC124648
PAGE	1 of 1
DATE	17 January 2006

CHEMICAL COMPOSITION PERCENT / MECHANICAL TESTS (TEST SPECIFICATION -)

PACK NUMBER	(Sample) HEAT No	C (x100)	Si (x100)	Mn (x100)	P (x1000)	S (x1000)	Cu (x1000)	Ni (x1000)	Cr (x1000)	Mo (x1000)	V (x1000)	Nb (x1000)	Ti (x1000)	Al (x1000)	B (x10000)	N2	CE( ) (x100)	BEND 180°	YIELD	T.S.	%ELONG G.L.=	HARDNESS	r ( )	LENGTH (feet)
HP-997711-00	646664	6	1	20	9	19												Good						942
HP-997712-00	646664	6	1	20	9	19												Good						961
HP-997713-00	646846	5	TR	20	11	19												Good						955
HP-997714-00	646846	5	TR	20	11	19												Good						955
HP-997715-00	646664	6	1	20	9	19												Good						955
HP-997716-00	646664	6	1	20	9	19												Good						955
HP-997717-00	646846	5	TR	20	11	19												Good						958
HP-997718-00	646846	5	TR	20	11	19												Good						958
HP-997719-00	646846	5	TR	20	11	19												Good						958
HP-997720-00	646846	5	TR	20	11	19												Good						958
HP-997721-00	646846	5	TR	20	11	19												Good						958
HP-997722-00	646846	5	TR	20	11	19												Good						958

YIELD	GAUGE LENGTH (G.L.)	PLASTIC STRAIN RATIO (r)	IMPACT TEST	CARBON EQUIVALENT VALUE (CE)
(A)=0.2% PROOF STRESS (D)=LOWER YIELD STRESS	(A)=200mm (B)=50mm (C)=80mm (D)=5.65 √ So (E)=2" (F)=8"	(A)=r0 (B)=r90 (C)=r45 (D)=(r0+r90+2r45) / 4	(A)=10mm x 10mm (B)=7.5mm x 10mm (C)=5mm x 5mm (D)=2.5mm x 10mm (E)=5mm x 10mm	(A)=C+Mn/6 (B)=C+Mn/6+(Cr+V+Mo)/5+(Cu+Ni)/15 (C)=C+Mn/6+Si/24 (D)=

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN TESTED AND INSPECTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION

APPROVED Aatish Misra
QC METALLURGIST